

## TRACKBALL CONTROL DEVICE

### ABSTRACT OF THE DISCLOSURE

A trackball device in which the exposed top of a trackball (30) can be moved to pivot a pair of coding shafts (32L, 32T) about perpendicular axes, with control signal generators that detect such pivoting used to control a function such as a cursor on a screen. The control signal generator associated with each coding shaft includes a multi-toothed pinion (44L, 44T) fixed to the coding shaft and a deflectable rod (70L, 70T) lying between a pair of teeth of the pinion. When the coding shaft and pinion turn, the deflectable rod is deflected until the pinion tooth passes by it and the rod springs back to its original vertical position, where the next tooth can again deflect it. A rod deflection sensor detects every rod deflection and its direction to provide signals indicating the direction and extent of turning of the trackball. The trackball, coding shafts and other parts lie in a housing (22). A flat flexible cable (28) projects through a slit in the housing and lies on the bottom wall of the housing. A cable portion or span within the housing has exposed contacts that engage terminals of electronic components such as the deflection rod sensors.